



April 5, 2012

Mr. David Andrews  
On-Scene Coordinator  
U.S. Environmental Protection Agency Region 4  
61 Forsyth Street, SW  
Atlanta, Georgia 30303

**Subject: Final Soil and Debris Removal Work Plan  
Liberty Fibers Emergency Response  
EPA Contract No. EP-W-05-054 (START III Region 4)  
Technical Direction Document (TDD) No. TTEMI-05-001-0126**

Dear Mr. Andrews:

In accordance with your direction, the Tetra Tech Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) is submitting the enclosed final Soil and Debris Removal Work Plan to summarize activities to be conducted in support of the Liberty Fibers Emergency Response site located in Morristown, Hamblen County, Tennessee. This work plan provides a summary of the soil and debris removal operations as understood by Tetra Tech at the time of this submittal. Although Tetra Tech will not be responsible for implementation and enforcement of the work plan, we will monitor compliance with the plan on behalf of the Environmental Protection Agency (EPA) and provide technical support, including updating the work plan based on changes in operations and site conditions, as well as any appropriate modifications based on recommendations or direction from the EPA. Future removal activities not covered in this work plan will be addressed in subsequent work plans.

Please call Paul Prys at (678) 775-3106 or Bryan Erickson at (816) 225-4030 if you have any questions regarding this report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Paul Prys'.

Paul Prys  
START III Project Manager

A handwritten signature in black ink, appearing to read 'Andrew F. Johnson'.

Andrew F. Johnson  
START III Program Manager

Enclosure

cc: Katrina Jones, EPA Project Officer  
Brian Croft, Tetra Tech START III Task Order Manager  
Angel Reed, Tetra Tech START III Document Control Coordinator

**FINAL**  
**SOIL AND DEBRIS REMOVAL WORK PLAN**  
  
**LIBERTY FIBERS EMERGENCY RESPONSE**  
**MORRISTOWN, HAMBLLEN COUNTY, TENNESSEE**

Prepared for  
  
**U.S. ENVIRONMENTAL PROTECTION AGENCY**  
**Region 4**  
**Atlanta, Georgia 30303**



Contract No.	:	EP-W-05-054
TDD No.	:	TTEMI-05-001-0126
Date Prepared	:	April 5, 2012
EPA Task Monitor	:	David Andrews
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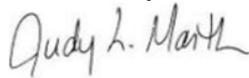
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Paul Prys  
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## 1.0 INTRODUCTION

Under Superfund Technical Assessment and Response Team (START) Contract Number (No.) EP-W-05-054, Technical Direction Document (TDD) No. TTEMI-05-001-0126, the U.S. Environmental Protection Agency (EPA) tasked Tetra Tech EM Inc. (Tetra Tech) to prepare this final Soil and Debris Removal Work Plan to summarize activities to be conducted in support of the Liberty Fibers Emergency Response site located in Morristown, Hamblen County, Tennessee. This work plan provides a summary of the removal operations as understood by Tetra Tech at the time of this submittal. Although Tetra Tech will not be responsible for implementation and enforcement of the work plan, we will monitor compliance with the plan on behalf of the EPA and provide technical support, including updating the work plan based on changes in operations and site conditions, as well as any appropriate modifications based on recommendations or direction from the EPA. The goal of this work plan is to define procedures to safely remove and dispose of asbestos-contaminated demolition debris and soil, as well as to define procedures to safely reduce the size of the concrete demolition debris for easier transport to the site landfill.

### 1.1 Scope of Work

EPA issued TDD No. TTEMI-05-001-0126 to conduct the removal and disposal of asbestos-contaminated demolition debris, associated contaminated soil, and damaged and exposed asbestos-containing materials throughout the site. Removal and disposal activities at the Liberty Fibers Emergency Response site will be performed in accordance with Title 40, Code of Federal Regulations (CFR), Section 61 (40 CFR 61), National Emission Standards for Hazardous Air Pollutants (NESHAP), as well as Tennessee Department of Environment and Conservation (TDEC) Division of Air Pollution Control regulations. This work plan focuses on the removal of asbestos-contaminated demolition debris and soil, as well as the reduction of concrete demolition debris to a size manageable for removal and transport to the on-site landfill. This work plan will address the implementation of procedures for the reduction of dust created during the removal of asbestos-contaminated demolition debris and associated soil, as well as many of the health and safety concerns, including personnel decontamination. Future removal activities not covered in this work plan will be addressed in subsequent work plans.

### 1.2 Background Information

The Liberty Fibers Emergency Response site is located at 4855 Enka Highway, Morristown, Hamblen County, Tennessee. The site occupies approximately 300 acres and is bordered by a small residential

community to the north, landfills and a retention pond to the east, the inactive nylon and polyester staple plants to the south, and a water treatment plant and farmland to the west.

The Liberty Fibers site is a former rayon fiber manufacturer. According to a briefing memorandum prepared by TDEC, Liberty Fibers filed for bankruptcy in September 2005. A&E Salvage Company (formerly J&N Salvage Company) bought the salvage rights to the Liberty Fibers property in October 2006. The salvage rights include any and all equipment and materials located on the property and the option to purchase the property.

In September 2006, TDEC, in coordination with the EPA, conducted a site visit in response to a tip TDEC received regarding demolition activities and the presence of hazardous materials, including polychlorinated biphenyls (PCBs) on site. During the site visit, TDEC observed approximately 24 transformers and 80 capacitors that were labeled as containing PCBs. Also in September 2006, the Commissioner of TDEC received a letter from the Mayor of Hamblen County expressing his concern about the potential for release of on-site PCBs, asbestos, and other chemicals during the ongoing salvage operations at the site. During a discussion among the EPA personnel, A&E Salvage Company personnel, a Liberty Fibers representative, the court-appointed trustee, and TDEC personnel in October 2006, A&E Salvage Company acknowledged that it was the owner of the PCB equipment and that it would accept full legal responsibility for proper removal and disposal of the PCB equipment in compliance with appropriate regulations.

A&E Salvage Company submitted a plan to the EPA in January 2007 for sampling and removal of all transformers and capacitors located on site. A&E Salvage Company contracted SD Myers to sample the dormant on-site transformers and capacitors and submit the samples for PCB analysis. The energized transformers and capacitors could not be sampled, however, until Morristown Utilities ran new service to the site. SD Meyers sampled 39 transformers: four transformers were found to contain PCBs, 12 units were found contaminated with PCBs, and 23 units did not contain PCBs. A&E Salvage Company also contracted Booher Industrial Company of Jasper, Georgia, to remove and dispose of the transformers; however, the EPA later informed A&E Salvage Company that Booher Industrial Company was not an EPA-approved commercial storage and disposal facility for PCB-regulated waste.

In March 2007, A&E Salvage Company held a meeting with IPI Business and Morristown Utilities, during which the City of Morristown decided to annex the Liberty Fibers site and include the site as part

of its Urban Growth Boundaries. As a result, the City of Morristown would be responsible for providing utility services, including power and water, to the Liberty Fibers site.

In March 2008, the EPA Resource Conservation and Recovery Act (RCRA) and Oil Pollution Act Enforcement and Compliance Branch contacted the Emergency Response and Removal Branch (ERRB) regarding conducting a removal assessment of the facility. EPA On-Scene Coordinator (OSC) Spurlin contacted the EPA and TDEC representatives involved with the facility to discuss the site and review documentation. OSC Spurlin, supported by Tetra Tech, as well as representatives from TDEC, the EPA Asbestos, the EPA RCRA Division, and the EPA Toxic Substances Control Act Enforcement programs, coordinated a site visit for March 20 and 21, 2008. The EPA and Tetra Tech were joined by Mr. Mark Sawyer, a local investor in A&E Salvage Company, and Mr. Tom Montgomery, a former employee of Liberty Fibers Corporation. During the site visit, the EPA and Tetra Tech observed several drums, totes, and tanks; bags labeled as “asbestos containing material”; a 50,000-gallon sulfuric acid tank containing approximately 8 inches of product; known and suspect PCB-containing articles and oils; suspect asbestos-containing material (ACM); and discolored soil throughout the property. In addition, Mr. Montgomery identified the on-site concrete vault that contains six 10,000-gallon tanks used to store carbon disulfide, an extremely flammable chemical used in manufacturing rayon. The vault is typically filled with water, submerging the tanks, to reduce the risk of fire and explosion. Mr. Montgomery also identified a leak in the western wall of the vault, as a result of which the tanks were only half submerged.

In December 2009, EPA OSC Gaughan, Tetra Tech personnel, and TDEC personnel conducted another site visit with Mr. Sawyer. During the site visit, Mr. Sawyer informed the EPA and Tetra Tech that the carbon disulfide tanks within the concrete vault had not contained any product, had been removed from the vault sometime in the spring of 2009, and had been sold for scrap metal. The tanks had been removed because of potential for explosion. Currently, the water that submerged the tanks remains in the vault. The Power Mechanical Shop contains bagged asbestos waste, and the Welding Shop contains PCB-contaminated transformers and capacitors. Although the facility was partially demolished, the debris fields - mixed with presumed ACM - remained. Recycling and reclamation operations were ongoing, and at least one metals recycling business was currently operating on site.

From January 18 through 22, 2010, Tetra Tech START conducted a removal assessment (RA) of the site. The RA consisted of six primary objectives: collecting bulk asbestos samples; conducting a geophysical investigation in an attempt to identify the locations of possible buried transformers; collecting aqueous and solid waste samples from the carbon disulfide tank vault and surrounding area; collecting solid waste

samples from two neutralization pits; collecting waste samples from on-site drums and totes; and collecting personal and area air samples for Phase Contrast Microscopy (PCM) analysis to evaluate the level of exposure of site personnel to airborne asbestos fibers during the assessment and to determine the level of concentration of airborne asbestos fibers that may be migrating off site.

On April 21, 2010, the EPA and Tetra Tech START conducted an emergency response site assessment in response to a debris fire on site. The fire occurred in the foundation of a demolished cooling tower located on the west side of the site. On April 29, 2010, Tetra Tech START conducted a visual assessment of presumed ACM in the remaining tenant buildings on site.

On March 17, 2011, the EPA and Tetra Tech START conducted a drainage assessment at the Liberty Fibers Rayon Plant and the potential effects on various buildings located at the Nylon Staples Plant.

## **2.0 ASBESTOS REMOVAL ACTIVITIES**

The asbestos removal activities conducted in the work area (also known as the Exclusion Zone) at the Liberty Fibers Emergency Response site identified in this work plan will be performed by CMC, Inc. (CMC), the EPA Emergency Response and Removal Services (ERRS) contractor. All CMC personnel involved with the soil and debris removal activities will be State of Tennessee-accredited asbestos workers and supervisors as appropriate based on their assigned tasks. The asbestos removal activities addressed in this work plan are as follows and will be discussed in the subsequent paragraphs:

- Pre-removal preparations
- Removal of asbestos-contaminated demolition debris
- Reduction of concrete demolition debris
- Waste disposal
- Entry and exit of work area

### **2.1 Pre-removal Preparations**

In preparation for asbestos removal activities at the Liberty Fibers Emergency Response site, CMC will construct a landfill for the acceptance of asbestos-contaminated waste that will comply with the EPA and TDEC regulations for landfills identified to accept asbestos waste. The landfill will be located approximately 0.3 miles east of the facility in a former on-site retention pond. With the guidance of the EPA, CMC will be responsible for draining the pond, removing all vegetation from the area, contouring

the landfill area, and stabilizing the pond floor for the acceptance of asbestos-containing waste.

CMC will construct, at a minimum, a three-stage decontamination unit adjacent to the Exclusion Zone that complies with Class I and Class II work as defined in 29 CFR 1926.1101. The decontamination unit, at a minimum, will be comprised of an equipment room, a shower room, and a clean room in series. Prior to the construction of the decontamination unit, CMC will provide location recommendations to the EPA for approval. Following approval from the EPA, CMC will begin construction of the decontamination unit.

CMC will submit a Form CN-1055, *Notification of Asbestos Demolition or Renovation Application*, to the TDEC Division of Air Pollution Control at least 10 working days prior to commencing any asbestos removal activities at the site.

## **2.2 Removal of Asbestos-Contaminated Demolition Debris**

Asbestos removal activities at the Liberty Fibers Emergency Response site will primarily be comprised of Class I and Class II work as defined in 29 CFR 1926.1101 and will be removed in accordance with 40 CFR 61. Various types of asbestos-containing materials (ACM) are assumed to be distributed throughout the demolition debris located on site. Removal activities will take place in 200 foot by 200 foot work area grids to provide adequate controls for the safe removal of the demolition debris. Depending on site conditions, demolition debris located on the ground will be sufficiently wetted with water and/or amended water using a water truck prior to removal to minimize the generation of airborne dust. The wetted debris will be removed from the ground surface using a tracked excavator and placed into off-road articulated dump trucks for transport to the on-site landfill. Dump trucks will not depart the work area with demolition debris protruding from the sides or the rear of the vehicle in order to prevent debris falling from the trucks during transport to the landfill. The wetting of the material will continue throughout the entire loading process to ensure the debris remains wet until it arrives at the specified dumping location within the on-site landfill.

Following completion of the removal of the demolition debris from each work area, CMC will remove six inches of topsoil from the work area. Depending on site conditions, the soil will also be sufficiently wetted with water and/or amended water using a water truck prior to removal to minimize the generation of airborne dust. The soil will be removed using a tracked excavator and placed into off-road articulated dump trucks for transport to the on-site landfill. The soil will be placed in the dump trucks in such a

manner that the soil will not leave the vehicle during transport. The work area will be visually inspected by the EPA OSC, or State of Tennessee-accredited asbestos project monitor, to verify that all of the debris has been removed from each work area. If there is remaining debris in the work area, additional soil will be removed until all visible debris has been removed. Confirmation clearance soil sampling will be conducted by Tetra Tech in accordance with the Tetra Tech site-specific Sampling and Analysis Plan (SAP).

In the event demolition debris is removed from an area without soil (i.e. from a concrete pad or from within a former building footprint), the debris, depending on site conditions, will be sufficiently wetted with water and/or amended water using a water truck prior to removal to prevent a release of airborne dust. The remaining area will be washed using soap and water and rinsed using a high volume pressurized hose in such a manner that the runoff is contained in one area. The soil from the area in which the water was contained will then be excavated and transported to the site landfill. Once the area has dried, an encapsulant will be applied to ensure that any remaining fibers can no longer be released into the air. The type of encapsulant used will be in accordance with the direction provided by the EPA.

### **2.3 Reduction of Concrete Demolition Debris**

In order safely and efficiently transport some of the demolition debris to the on-site landfill, CMC will need to reduce the size some of the concrete that is currently too large for transport. CMC will use a concrete pulverizer attachment on an excavator to reduce the size of the debris to more manageable pieces. During concrete pulverization, CMC will remove and segregate rebar or other associated types of metal to the extent practicable. This will be accomplished using a grapppler attachment on an excavator. All metal that is salvageable will be rinsed thoroughly with high pressure spray and ultimately recycled.

Since the potential for fiber release increases during concrete pulverization, CMC will be responsible for ensuring that the concrete undergoing additional demolition is sufficiently wetted using water and/or amended water depending on site conditions. Depending on the location of the concrete undergoing additional demolition and with EPA approval, CMC may use water that has accumulated in existing underground structures for dust suppression. Prior to using this water, Tetra Tech will collect samples for analysis in accordance with the Tetra Tech site-specific SAP. After the sample results are reviewed and the water has been deemed acceptable for use by the EPA, CMC will pump the water from the underground structure(s) and apply it to the nearby work area for dust suppression.

## **2.4 Waste Disposal**

Waste from asbestos-contaminated demolition debris generated during removal activities will be disposed of in the landfill located approximately 0.3 miles east of the facility in a former on-site retention pond. Off-road articulating dump trucks will transport site-generated waste to the landfill for disposal. The dump trucks will follow a designated route through the site to the landfill as identified by the EPA. CMC will record the number of truckloads, as well as the amount and type of waste deposited into the landfill each day. At the completion of each work day, CMC will cover the asbestos-contaminated demolition debris in such a manner as to prevent the release of airborne fibers (i.e. six inches of soil or an EPA-approved encapsulant).

All wastes generated by CMC personnel during general work and decontamination activities will be placed into a six millimeter (mil) plastic bag and sufficiently wetted prior to sealing the bag with duct tape. The first six mil plastic bag will be placed into a second six mil plastic bag, sealed with duct tape, and placed into an off-road articulated dump truck for transport to the on-site landfill for disposal. If transport to the on-site landfill is unavailable, CMC will stage the disposal bags on a six mil plastic tarp and cover until transport is available. All disposal bags will be labeled in accordance with 29 CFR 1926.1101(k)(8) and of sufficient size and contrast so as to be readily visible and legible.

Decontamination of equipment used during and associated wastes generated from the removal and disposal of asbestos-contaminated demolition debris, associated contaminated soil, and damaged and exposed asbestos-containing materials throughout the site are addressed in a separate site specific work plan.

## **2.5 Entry and Exit of Work Areas**

CMC personnel will enter and exit the Exclusion Zone through the Contamination Reduction Zone in accordance with 29 CFR 1926.1101 and the CMC site-specific health and safety plan (HASP). Each CMC employee will sign in and out prior to entering and after exiting the Exclusion Zone. Since all soil and demolition debris removal activities will be conducted outside, CMC will adopt different procedures for entry and exit of the work area for operations conducted in cold weather and in hot weather.

### **2.5.1 Entry and Exit of Work Area - Cold Weather Activities**

During cold weather work activities, CMC personnel will enter into the clean change area wearing “street clothing” and steel-toed boots. All CMC personnel will place the following protective equipment over their clothing and steel-toed boots prior to entering the Exclusion Zone: two Tyvek<sup>®</sup> or similar protective suits with head covers; a full-face respirator fitted with P100 [formerly known as high-efficiency particulate air (HEPA)] cartridges; two layers of nitrile gloves; waterproof, disposable booties; and work gloves, if needed. Steel-toed boots may be replaced with steel-toed rubber boots that are easily decontaminated. Duct tape will be used to seal any openings located around the face, hands, and feet.

When exiting the Exclusion Zone through the Contamination Reduction Zone, CMC personnel will first shower and/or spray the outer protective suit and the disposable booties or steel-toed rubber boots with water to remove any gross contamination. If the disposable booties or steel-toed rubber boots need additional decontamination, CMC personnel will enter the boot wash area to remove all remaining debris prior to entering the decontamination line. Outer protective suits, boot covers or steel-toed rubber boots, and gloves will be removed in the decontamination line outside of the equipment room and placed in a six mil plastic bag for disposal. The inner protective suit will be removed in the equipment room and placed in a six mil plastic bag for disposal. Prior to entering the shower area, CMC personnel will clean their work clothes using a HEPA vacuum, continue to the respirator decontamination station to triple rinse the respirators, proceed to the shower room for additional decontamination, as needed, and then enter the clean room wearing their “street clothing”.

### **2.5.2 Entry and Exit of Work Area - Hot Weather Activities**

During hot weather work activities, CMC personnel will enter into the clean change area, remove “street clothing”, and dress in one Tyvek<sup>®</sup> or similar suit with head cover; full-face respirators fitted with P100 [formerly known as (HEPA)] cartridges; two layers of nitrile gloves; steel-toed boots covered with waterproof, disposable booties; two layers of nitrile gloves; and work gloves, if needed. Additional clothing, that is easily decontaminated, may be worn underneath the suits (i.e. swim wear or neoprene shorts) when appropriate. Steel-toed boots may be replaced with steel-toed rubber boots that are easily decontaminated. CMC personnel will enter and exit the Exclusion Zone through the Contamination Reduction Zone in accordance with 29 CFR 1926.1101 and the CMC site-specific health and safety plan (HASP).

When exiting the Exclusion Zone through the Contamination Reduction Zone, CMC personnel will first shower and/or spray the outer protective suit and the disposable booties or steel-toed rubber boots with water to remove any gross contamination. If the disposable booties or steel-toed rubber boots need additional decontamination, CMC personnel will enter the boot wash area to remove all remaining debris prior to entering the decontamination line. Boot covers or steel-toed rubber boots, and gloves will be removed in the decontamination line outside of the equipment room and placed in a six mil plastic bag for disposal. The protective suit will be removed in the equipment room and placed in a six mil plastic bag for disposal. CMC personnel will proceed to the shower room with respirator for additional decontamination and then enter the clean room to change back into their “street clothing”.

### **3.0 SCHEDULE**

CMC will provide a schedule of work activities to the EPA prior to the start of removal activities. The schedule will include the estimated number of days it will take to complete removal activities in a specific work area and the approximate quantity of waste to be removed. The schedule, as well as any necessary changes, will be approved by the EPA.

#### 4.0 SITE MANAGEMENT

The following list identifies key personnel associated with this project:

NAME	ORGANIZATION/ROLE	CONTACT INFORMATION
Mr. Dave Andrews	EPA Region 4 On-Scene Coordinator and Task Monitor	61 Forsyth Street SW, 11 <sup>th</sup> Floor Atlanta, GA 30303 (404) 562-8763 <a href="mailto:andrew.david@epa.gov">andrew.david@epa.gov</a>
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## 5.0 HEALTH AND SAFETY

CMC will provide accredited workers and supervisors that meet the requirements of 40 CFR 763, Appendix C to Subpart E, the EPA Model Accreditation Plan, and TDEC Chapter 1200-01-20 Asbestos Accreditation Requirements. CMC will implement medical surveillance and respiratory protection programs in accordance with 29 CFR 1926.1101 and 29 CFR 1910.134. Personal air monitoring will be conducted by designated CMC personnel during asbestos removal and concrete pulverization activities. All personal air monitoring will be conducted in the breathing zone to assess potential exposures to airborne asbestos fibers and crystalline silica. Additional information pertaining to site air monitoring is located in the CMC site-specific HASP.